

REMARKS

Claims 50, 52-59 and 61-65 are pending in the subject application.

Claims 50, 52-59 and 61-65 stand rejected under 35 U.C.S. § 112, first paragraph, as failing to comply with the written description requirement. In addition, claims 53 and 64 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants traverse these rejections and respectfully submit the following remarks and arguments to overcome the rejections.

Amendments to the Claims

Claims 53, 55, 62 and 64 have been amended to correct minor typographical errors. These amendments all find support in the specification as originally filed. Claim 50 has been amended to include the omitted term "about", which is supported by the specification as originally filed. (*See, for example, Page 4, line 15*).

Claim Rejections - 35 U.S.C. § 112, First Paragraph

Claims 50, 52-59, and 61-65 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner states that the claims contain subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention. Specifically, the Examiner states that support could not be found in the original specification for the phrase "the voids extend to the composite portion", and that the applicants are interpreting this phrase to mean that the voids extend beyond the etched surface region, which is not supported by the original specification.

Applicants submit that their interpretation of the phrase "the voids extend to the composite portion" is as follows. The article of the invention of the subject application comprises, in part, a composite portion comprising hard constituent particles in a binder; with an etched surface region substantially free of eta phase, where the etched surface region comprises substantially intact hard constituent particles and voids between the substantially intact hard constituent particles. (*See, for example, page 5, lines 8-11*). The plain interpretation of this structure is that the etched surface region comprises substantially intact hard constituent particles with voids between them. (*Page 5, line 10-11*). The etching process removes binder from the surface region resulting in the formation of voids, while leaving the hard constituent particles substantially intact. (*Page 9, lines 20-23*). If the resultant voids are between the substantially intact hard constituent particles on the surface region due to removal of the binder therebetween, then the voids will *extend down to the portion of the article comprised of the hard particles and the binder* (i.e., the composite portion). Applicants call the Examiner's attention to Figure I, a non-limiting illustration of a portion of a surface region of the article prior to coating that demonstrates how the voids between the hard particles extend down to the composite portion.

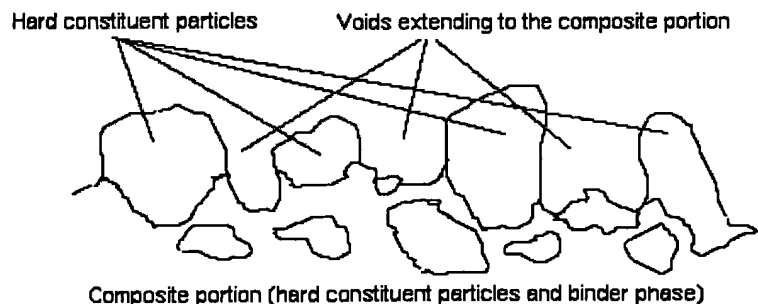


Figure I

Applicants submit that their interpretation is consistent with the plain meaning of the claim language in question and is supported by the specification as originally filed.

Applicants respectfully request that the rejection of claims 50, 52-59 and 61-65 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

Claims 53 and 64 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for having improper Markush groups. The Examiner states that the Markush language used renders the claims indefinite. The Examiner states that the indefiniteness arises in that the Markush groups include refractory carbonitrides and then lists some of these refractory nitrides. The Examiner also states that the molybdenum and tungsten materials are included in other groupings.

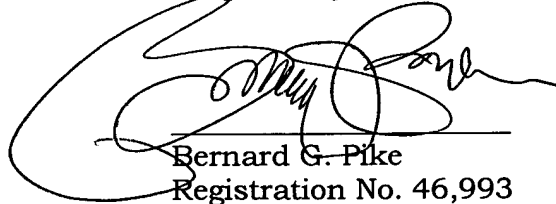
Applicants believe that claims 53 and 62, not 53 and 64, are the claims in question, both of which have the indicated Markush language. Applicants submit that the Markush language in the claims is not indefinite and that the double inclusions of specific refractory nitrides and of molybdenum and tungsten materials “does not lead to any uncertainty as to the scope of the claims for either examination or infringement purposes” (MPEP 2173.05(o)). The MPEP states that “[t]he mere fact that a compound may be embraced by more than one member of a Markush group recited in the claim does not necessarily render the scope of the claim unclear. For example, the Markush group, ‘selected from the group consisting of amino, halogen, nitro, chloro and alkyl’ should be acceptable even though ‘halogen’ is generic to ‘chloro’” (MPEP 2173.05(h)). In the subject application, claims 53 and 62 have members in the Markush groups that are generic to specific compounds within the groups. For example, the Markush language in both claims includes the generic “a carbonitride of a refractory metal” and also the more specific “a carbonitride of an

element selected from the group consisting of W, Ti, Ta, Nb, V, Cr, Mo, and Fe.” The term “refractory metal” is generic to the specific metals cited (W, Ti, Ta, Nb, V, Cr, Mo, and Fe). Applicants argue that the Markush language in the claims in question is analogous to the language cited in MPEP 2173.05(h) and is unlikely to cause uncertainty as to the scope of the claims and is acceptable according to U.S. patent practice. Likewise, the generic “a material comprising molybdenum; and a material comprising tungsten” and the more specific “a carbonitride of an element selected from the group consisting of W, Ti, Ta, Nb, V, Cr, Mo, and Fe” is not sufficient basis for a rejection of the claims. Again, Applicants argue that the Markush language in the claims is analogous to the language cited in MPEP 2173.05(h) and is unlikely to cause uncertainty as to the scope of the claims. In light of the above remarks, Applicants respectfully request that the rejection of claims 53 and 62 (rejected as claim 64) under 35 U.S.C. § 112, second paragraph, be withdrawn.

Conclusion

Applicants believe that they have fully addressed each basis for rejection. Reconsideration of the claims of the subject application and issuance of a Notice of Allowance is respectfully requested. Should the Examiner have any remaining concerns, she is requested to contact the undersigned at the telephone number below so that those concerns may be addressed without the necessity of issuing an additional Office Action.

Respectfully submitted,

A large, stylized handwritten signature in black ink, appearing to read 'Bernard G. Pike', is written over a horizontal line.

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